

DEVON COUNTY COUNCIL.

FIRST

ANNUAL REPORT

OF THE

County Medical Officer of
Health

FOR THE YEAR

1908.

EXETER :

WM. POLLARD & Co. LTD., PRINTERS AND LITHOGRAPHERS, NORTH STREET.
1909.

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**SUMMARY shewing the principal general items of the
Vital Statistics, etc., for 1908, contained in this
Report.**

Area of the Administrative County (Census 1901) 1,637,810 acres.

Population, estimated to middle of 1908 .. 448,266 persons.

Number of Sanitary Districts (1908) { 34 Urban, 18 Rural,
6 Port } = 58

	Year 1908.	Year 1907.
Birth Rate	20.3	.. 20.1
Death Rate	13.6	.. 14.3
Principal Infectious Diseases Death Rate	0.48	.. 0.54
Tuberculosis Death Rate	1.38	.. 0.98
Cancer Death Rate	1.03	.. 0.97
Infantile Mortality	88	.. 96



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OFFICE OF THE COUNTY MEDICAL OFFICER OF HEALTH,

14, BEDFORD CIRCUS,

EXETER.

July, 1909.

To the Chairman and Members of the Devon County Council.

MY LORDS AND GENTLEMEN,

I herewith have the honour to present my first Summary of the Annual Reports of the District Medical Officers of Health of the Administrative County, for the year ending December 31st, 1908.

My duties, which began on November 5th 1908, consist, in addition to that of a County Medical Officer, of the supervision of the Administration of the Midwives' Act, and that of the Medical Inspection of the children attending the Elementary Schools, for which latter purpose I was recognised as "School Medical Officer" by the Board of Education in January last.

My office, which comprises a room for my personal use, a waiting room, a room for my Clerk, and another for the Exeter Medical School Inspector, is situated in Bedford Circus, and was furnished for use at the beginning of this year.

The General Purposes Committee has granted me the means for the weekly linking up of all the notifications of the infectious diseases in the county for the use of the District

Medical Officers of Health, and for the free use of Bacteriology for these Officers and the School Medical Inspectors in regard to Diphtheria, Enteric Fever and Tuberculosis.

Your Education Committee has sanctioned the requirements and suggestions for carrying out Section 13 of the Education (Administrative Provisions) Act, 1907. The duties under this Act were begun on December 18th, since which date the three whole-time Medical Inspectors have been at work in the County.

With a view to prevent, as far as possible, the fallacies arising from dealing with small figures in preparing statistics, I have taken the Administrative County as a whole, except in the necessary division of urban and rural areas; and in giving details I have followed out the Memorandum, issued by the Local Government Board in November, 1908, as to the Annual Reports of Medical Officers of Health.

I here desire to thank the Members of the General Purposes and of the Education Committees for their kindness and ready help afforded to me in organizing the departments over which I have the honour to exercise supervision.

I am,

My Lords and Gentlemen,

Your obedient Servant,

GEORGE ADKINS,

County Medical Officer.

LIST OF MEDICAL OFFICERS OF HEALTH.

District.	Name.	Date of receipt of Report.
URBAN.	Dr. H. S. Johnson ..	19th March 1909.
	„ H. Paine ..	9th February
	„ J. R. Harper ..	3rd March
	„ M. R. Gooding ..	27th February
	„ G. B. Elliott ..	26th April
	„ H. Ubsdell ..	20th February
	„ C. Beesley ..	20th February
	„ H. M. Body ..	9th March
	„ J. H. Harris ..	2nd February
	„ H. B. Mapleton ..	15th March
	„ O. Eaton ..	7th April
	„ J. F. Wolfe ..	24th March
	„ W. G. Gray ..	13th April
	„ T. W. Shortridge ..	13th February
	„ E. J. Slade-King ..	8th March
	„ C. E. Cooper ..	5th March
	„ W. H. Webb ..	26th April
	„ H. J. Edwards ..	2nd March
	„ H. B. Mapleton ..	15th March
	„ E. J. Toye ..	3rd March
	„ E. H. Young ..	26th February
	„ F. M. Reynolds ..	22nd February
	„ C. W. Vickers ..	26th March
	„ V. W. Twinning ..	11th March
	„ H. A. Pattinson ..	8th February
	„ T. H. S. Pullin ..	29th March
	„ W. H. Wigham ..	25th January
	„ T. Leah ..	22nd February
	„ C. C. Brodrick ..	11th March
	„ F. C. H. Piggott ..	19th March
	„ R. B. Cullen ..	10th March
	„ E. Morse ..	8th February
	„ T. Dunlop ..	16th March
	„ K. R. Smith ..	11th March
RURAL.	„ W. Langran ..	5th March
	„ J. R. Harper ..	8th March
	„ W. Bethune ..	26th February
	„ C. G. Gibson ..	13th April
	„ H. M. Body ..	1st March
	„ W. H. Date ..	24th March
	„ W. G. Gray ..	2nd April
	„ F. M. Reynolds ..	3rd February
	„ W. H. Webb ..	19th April
	„ H. B. Mapleton ..	15th March
	„ E. H. Young ..	1st February
	„ S. Noy Scott ..	26th February
	„ H. M. Body ..	8th February
	„ M. Farrant ..	22nd February
	„ C. C. Brodrick ..	24th February
	„ J. R. R. Pollock ..	8th March
	„ E. Slade-King ..	2nd March
	„ H. S. Johnson ..	19th March

	District.	Name.	Date of Receipt of Report.
PORT.	Barnstaple	„ M. R. Gooding ..	10th March
	Dartmouth & Totnes ..	„ J. H. Harris ..	16th February
	Exeter	„ O. Eaton ..	24th June
	Kingsbridge and .. Salcombe	„ A. Pearce ..	15th January
	Plymouth	„ F. M. Williams .	19th June
	Teignmouth	„ F. C. H. Piggott	19th March

LEGISLATION FOR THE YEAR.

Looking at the work of Parliament as a whole, it may be regarded as affording plenty of evidence of the vitality of medical questions in both Chambers. Amongst the Acts which came in force the chief is the "Children Act." This is likely to prove a valuable addition to the Statute Book, as its enactments provide for the safeguard of infant and juvenile life, and add to the well-being of future generations. The Old Age Pension Act provides for the health and comfort of those at the other extreme of life ; whilst among the minor Acts are :—

- The Tuberculosis Prevention (Ireland) Act.
- The Poisons and Pharmacy Act.
- Public Health (Markets) Act.
- White Phosphorus Matches Prohibition Act.

The first will be watched with special attention as an experiment made to stamp out the scourge of Tuberculosis in Ireland, where the death toll is greatest.

Phosphorus poisoning should disappear under the provisions of the last named Act.

PHYSICAL FEATURES.

Devon, the third largest county in England, is bordered on the north by the Bristol Channel, on the south by the English Channel, on the west by Cornwall and the east by

TABLE I.

(LOCAL GOVERNMENT BOARD TABLE I.)
(Census 1901.)

Districts.	Acreage.	Total Population	No. of Inhabited Houses.	Average No. of persons per house.
URBAN.				
Ashburton ..	6925	2660	569	4.7
Bampton ..	7785	1657	371	4.4
Barnstaple ..	2359	14137	3144	4.4
Bideford ..	3196	8732	1843	4.7
Brixham ..	5595	8090	..	5.0
Buckfastleigh ..	1472	2520	584	4.3
Budleigh Salterton ..	840	1885	540	4.0
Crediton ..	2552	3980	..	..
Dartmouth ..	1847	6579	1125	5.8
Dawlish ..	1500	4003	892	4.5
Exmouth ..	4000	11472	2218	4.7
Heavitree ..	3500	7527	1533	4.9
Holsworthy ..	749	1371	285	4.8
Honiton ..	3134	3230	713	4.5
Ilfracombe ..	5836	8550	1819	4.7
Ivybridge ..	500	1575	..	..
Kingsbridge ..	808	3011	605	5.0
Lynton ..	7203	1641	408	4.0
Newton Abbot ..	4132	12518	2704	4.6
Northam ..	3042	5355	1154	4.6
Okehampton ..	502	2568	524	4.9
Ottery St. Mary ..	10008	3495	853	4.2
Paignton ..	5177	8385	1785	4.7
Salcombe ..	1184	1710	419	4.0
Seaton ..	1091	1325	309	4.2
Sidmouth ..	1600	4200	1030	4.0
South Molton ..	6450	2848	698	4.0
Stonehouse, East ..	190	15111	1462	10.3
Tavistock ..	1551	4728	867	5.4
Teignmouth ..	1635	8502	1905	4.4
Tiverton ..	17650	10382	2317	4.0
Torrington, Great ..	3456	3241	..	..
Torquay ..	3858	33625	6614	5.0
Totnes ..	1408	4034	..	..
Total ..	122735	214647	39290	4.7
RURAL.				
Axminster ..	52125	12203	2797	4.4
Barnstaple ..	132059	17692	4077	4.3
Bideford ..	53775	6400	1415	4.5
Broadwoodwidger ..	24116	2460	531	4.6
Crediton ..	93508	11500	..	..
Culmstock ..	20972	3336	752	4.4
Holsworthy ..	84690	7316	1583	4.6
Honiton ..	73054	9318	2147	4.3
Kingsbridge ..	70082	11366	2273	5.0
Newton Abbot ..	99142	18902	4229	4.5
Okehampton ..	114566	13211	..	..
Plympton St. Mary ..	73426	19793	4016	4.9
South Molton ..	134052	10480	..	..
St. Thomas ..	109640	24520	5650	4.3
Tavistock ..	141071	16304	3332	4.9
Tiverton ..	82000	15339	3486	4.3
Torrington, Great ..	79796	9260	2057	4.8
Totnes ..	77001	12848	..	..
Total ..	1515075	222248	38345	4.5
Administrative County	1637810	436895	77635	4.6

TABLE I.

Somerset and Dorset. It lies between latitudes $50^{\circ} 15'$ and $51^{\circ} 15'$, and contains 1,637,810 acres. Its geological structure is that of a vast synclinal trough, of which the marine Devonian formation of Exmoor in the north, and that from Dartmouth to Modbury in the south form the edges; while Silurian rocks, cropping out in the south from under the Devonian, compose the promontory from Start Point to Bolt Tail. In this great trough lie the carboniferous rocks (without the uppermost coal measure); through this stratified rock is forced the great granitic mass of Dartmoor. It is from here that most of the many streams yielding an abundance of potable waters have their origin.

POPULATION.

The Administrative County consists of 448,266, of whom 225,458 are in the 32 urban districts, and 222,808 in the 18 rural districts, but the whole population may be considered "rural"; for the urban districts—excluding those of Barnstaple, Tiverton, Newton Abbot and Exmouth—are small, and have the advantages pertaining to rural areas.

The main occupation of the population is that of agriculture, but along the coast a large portion of the inhabitants is engaged in catering for visitors and in the fishing industry. There are a few trades carried on, the chief being the manufacture of paper, boots and shoes, woollen material and pottery. There are some corn mills and tanning yards. None of the above trades can be classified as dangerous.

On Table I, will be found the acreage, population, number of inhabited houses and number of persons per house for each urban and rural district. The density of population in all the districts runs on a fairly even line, with the exception of East Stonehouse, which is more than double that of any other district except Dartmouth and Tavistock. This is a matter that should seriously engage the attention of the Council, in order that the overcrowded condition of this district, which is wedged in between Devonport and Plymouth, may be relieved. It has a greater density of population than either of the adjoining towns, Plymouth being 7.8 and Devonport 8.8 per house.

VITAL STATISTICS.

BIRTHS.

During the year there were 9,140 births registered in the County (4,516 in the urban, and 4,624 in the rural areas).

The birth-rate was 20.3 per 1,000, being slightly in excess of that for the previous year, which was 20.1 per 1,000.

TABLE II.

BIRTH-RATES.

Districts.	Rates per 1,000 of population.									
	1899	1900	1901	1902	1903	1904	1905	1906	1907	1908
Urban	22.1	20.2	21.3	21.1	20.6	21.3	20.4	20.3	19.5	20.0
Rural	23.1	21.7	22.1	22.8	22.2	22.0	22.0	21.7	20.7	20.7
Administrative County ..	22.6	21.0	22.2	21.9	21.4	21.7	21.2	21.0	20.1	20.3
England and Wales ..	29.3	28.9	28.5	28.6	28.4	27.9	27.2	27.0	26.3	26.5

On looking at Table II, it will be seen that there has been a slight decline in the birth-rate for the last ten years, with very little difference between the rates of the urban and rural districts. The rates are considerably lower than those of England and Wales. These are shown on the table for the corresponding years. The declining birth-rate of the country is a very serious matter for the future of the Empire, and can only be obviated by further legislation and moral influences. It behoves sanitarians also to take every means to preserve the children that are born.

On referring to Table III, the columns present a marked irregularity in the different districts, more so in the urban than the rural, but it is impossible to draw conclusions from these on account of the nature and difference in numbers of the populations. This is very apparent in regard to Bampton and Budleigh Salterton, where the classes of inhabitants differ. The absence of a few births, or the accidental occurrence of

TABLE III.

1908.

BIRTH-RATES.

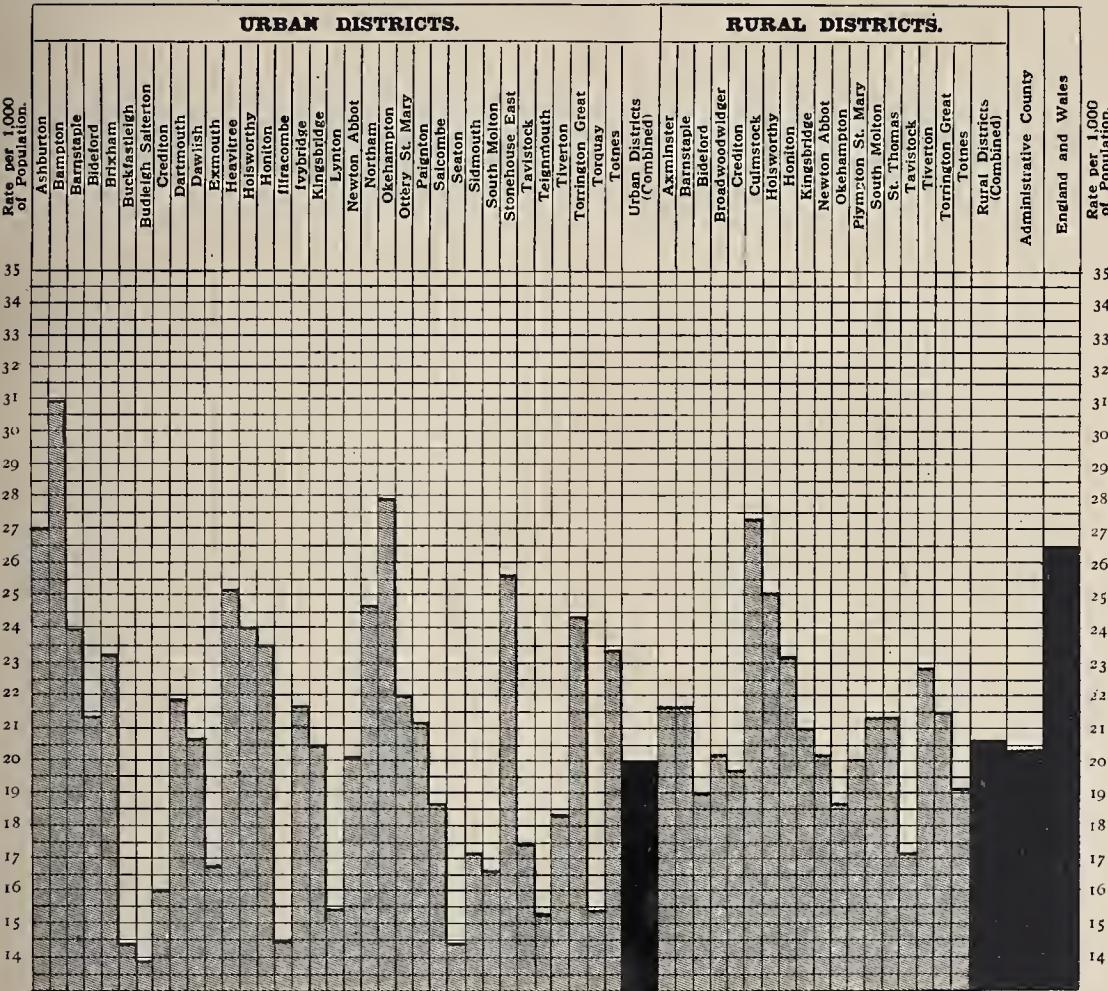


TABLE V.

1908.

GENERAL NETT DEATH-RATES.

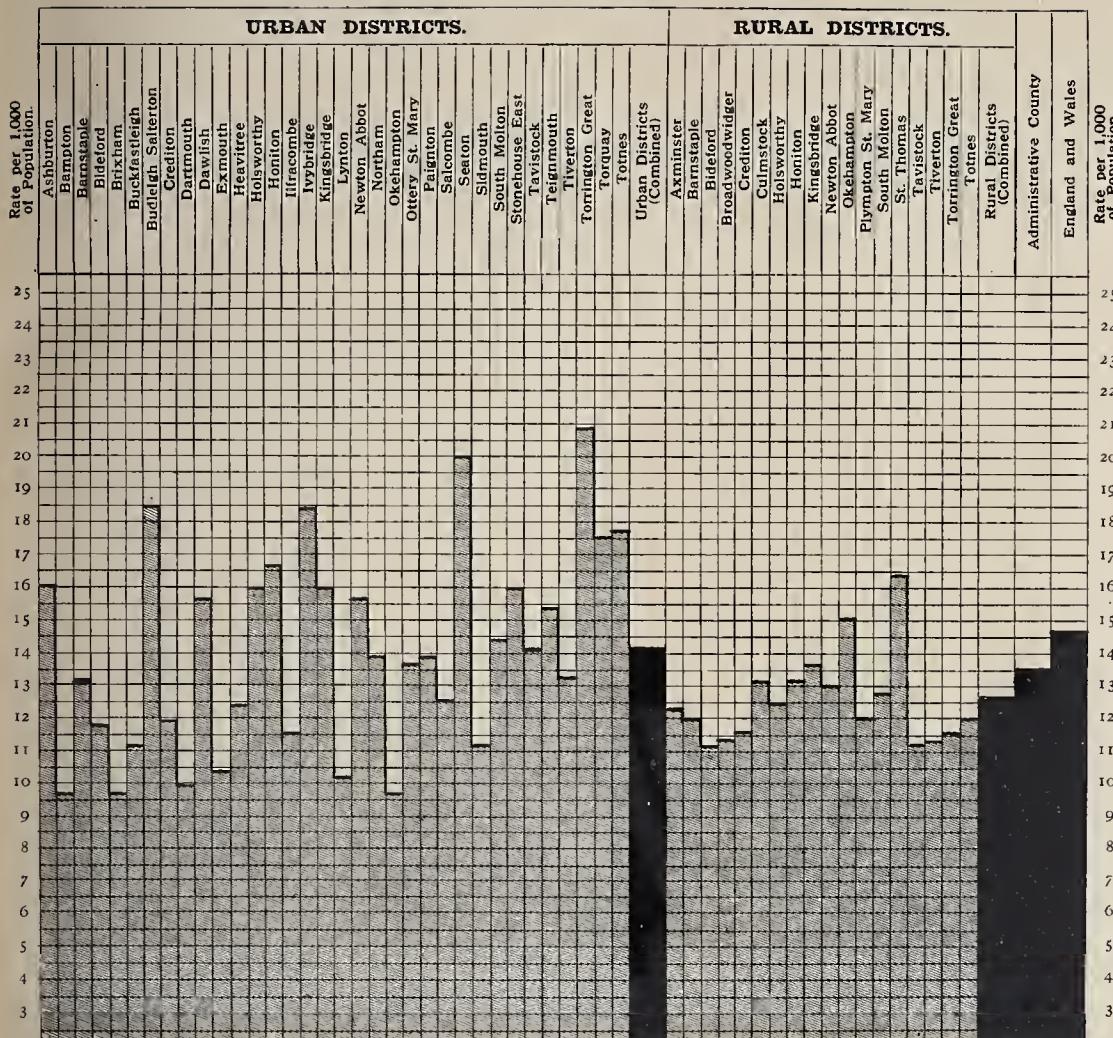


TABLE V.

GENERAL NETT DEATH-RATES.

two or three, at once considerably alters the rate. No information can be given as to the illegitimate birth-rate, as some of the reports do not furnish any details.

DEATHS.

The total number of deaths registered during the year is 6,116 (3,277 in the urban, and 2,839 in the rural districts). The nett death-rate being 13.6 per 1,000 against 14.3 per 1,000 for the preceding year. The urban rate was 14.2 and the rural rate 12.7 per 1,000.

TABLE IV.

DEATH-RATES.

Districts.	Rates per 1,000 of population.									
	1899	1900	1901	1902	1903	1904	1905	1906	1907	1908
Urban	15.3	15.3	15.3	16.5	14.4	15.0	15.6	14.3	14.8	14.2
Rural	14.4	14.2	13.5	13.7	12.8	14.1	13.7	13.0	13.8	12.7
Administrative County ..	14.8	14.7	14.3	15.0	13.6	14.5	14.7	13.6	14.3	13.6
England and Wales ..	18.2	18.2	16.9	16.2	15.4	16.2	15.2	15.4	15.0	14.7

On referring to Table IV, it will be seen that the death-rate is as low as it has been for the last ten years, being the same as that for the years 1903 and 1906. The urban rate is slightly less than that of last year, and the rural rate is the lowest for the last decennium. There is a more marked decrease here than in the urban areas. The decline is not so rapid as, but is lower than that of England and Wales, which rate stands last year at 14.7, the lowest on record.

The columns on Table V present a marked irregularity in the different districts, more so in the urban than the rural. It is impossible to draw conclusions from these, especially from the urban ones, on account of the age condition, social position, and occupation of the inhabitants, and with the

fact of dealing with small numbers. It is also impossible to judge of the health of a small district from statistical tables, unless the above conditions are taken into consideration ; for instance, Seaton, Budleigh Salterton and Torquay give high death-rates, but these are explained by the number of invalids who go to these places to die. Brixham, Bampton and Okehampton are not affected in this way. Great Torrington stands at the head in the urban districts on account of its high Tuberculosis death-rate ; and St. Thomas has the highest rate in the rural areas (16.4 per 1,000), probably on account of its relation to Exeter.

On Table VI (see end), will be found the details as to age and cause of death of all cases registered in the Administrative County.

INFANT MORTALITY.

This important matter is at present engaging the serious attention of our Sanitary Authorities and those engaged in social reform. On account of the diminishing birth-rate, it is felt, that if the population is to be kept up in this country, there is an urgent need to rear every child born. To be successful in this undertaking the serious fact has also to be faced that every precaution must be taken to prevent the production of a population of physical and moral cripples.

TABLE VII.

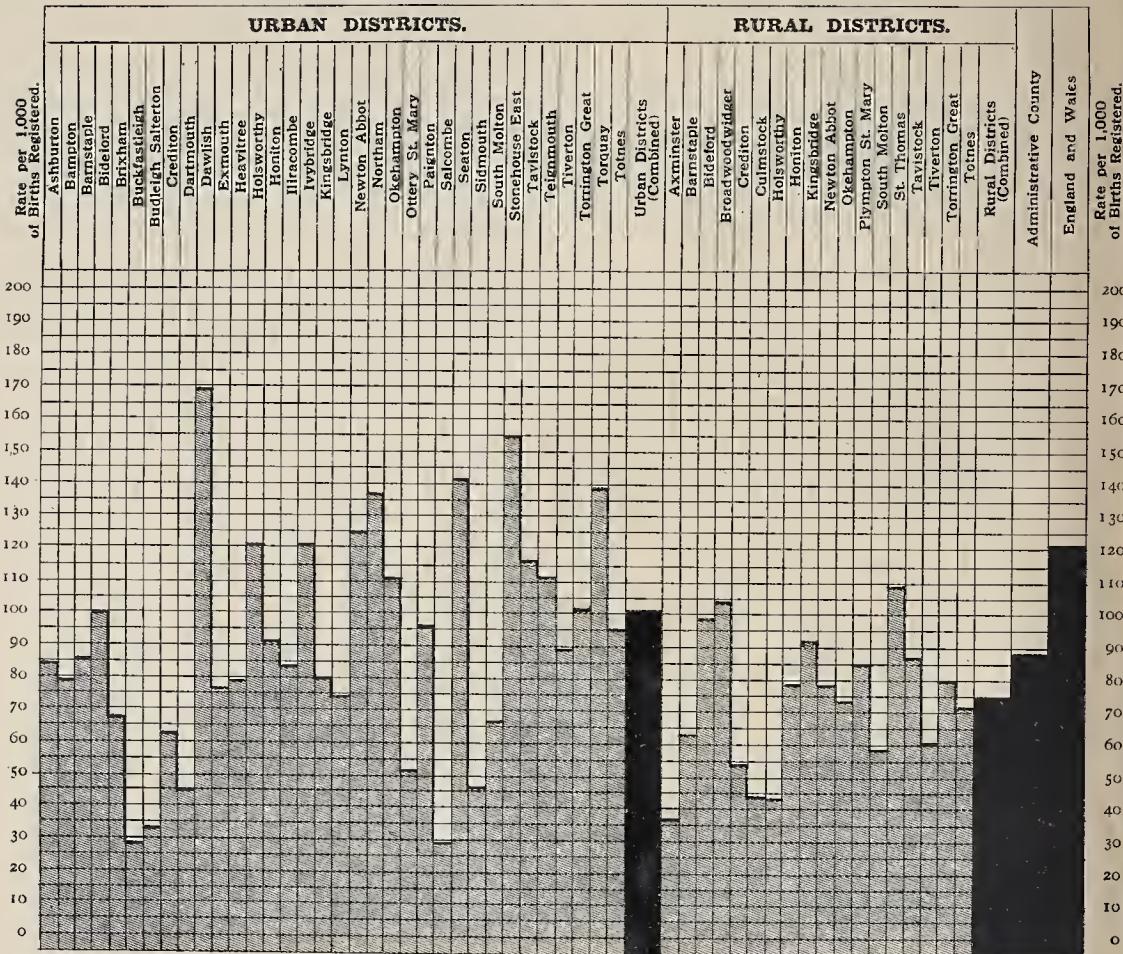
DEATH OF CHILDREN UNDER 1 YEAR.

Districts.	Rates per 1,000 Registered Births.									
	1899	1900	1901	1902	1903	1904	1905	1906	1907	1908
Urban	133	131	119	133	102	116	108	109	103	101
Rural	110	98	89	90	83	101	82	84	90	75
Administrative County ..	121	114	104	111	92	108	95	96	96	88
England and Wales ..	163	154	151	133	132	146	128	133	118	121

TABLE VIII.

INFANT MORTALITY.

TABLE VIII.
1908.
INFANT MORTALITY RATES PER 1,000 BIRTHS.



The infant mortality rate of the County, fortunately, stands at the low figure of 88 per 1,000, which, as will be seen from Table VII is the lowest on record for the last ten years, the rate for 1899 being 121 per 1,000 (which is also the present rate for England and Wales). As is to be expected, there is a marked difference in the rate for the urban and rural areas ; for in the former are found, in greater proportions, the conditions conducive to infantile mortality ; viz., overcrowding, bad ventilation, artificial feeding, accumulation of house refuse (harbouring flies which contaminate the milk supplies) and the employment of female labour.

The columns in Table VIII are very irregular, again depending on rates obtained from small numbers. Dawlish, on account of deaths among strangers (two from Whooping Cough and two from accidents), heads the list in the urban districts. The same condition applies to Seaton. The high rate at Torquay is due to Diarrhoea, which Dr. Dunlop attributes to the effect of the dry weather in July and August.

The Stonehouse rate would naturally be high on account of its density of population (10.3 against 4.6 for the rest of the County), and the social condition of the inhabitants. Among the rural districts St. Thomas stands at the head (as in the general death-rate) and from the same latter cause as that of Stonehouse. Dr. Farrant remarks that the infant rate is very high in the Exe division, and for the last ten years it has stood at the abnormal figure of 134 per 1,000.

Table IX (see end) gives the particulars of the ages and causes of death in relation to infant mortality.

DISEASES AMENABLE TO SANITARY REGULATIONS.

Under this heading are included the seven infectious diseases which come under the Notification Act, 1889. These are Smallpox, Scarlet Fever, Diphtheria, Membranous Croup, Enteric Fever, Puerperal Fever, and Erysipelas ; to this list are added Measles and Whooping Cough, which separately have almost a larger mortality rate than any combined two of the first named diseases.

TABLE X.

DEATHS FROM THE PRINCIPAL INFECTIOUS DISEASES.

Districts.	Rates per 1,000 of population.									
	1899	1900	1901	1902	1903	1904	1905	1906	1907	1908
Urban	0.79	1.26	0.79	0.68	0.53	0.76	0.81	0.51	0.52	0.51
Rural	0.71	0.67	0.69	0.37	0.46	0.61	0.51	0.57	0.57	0.45
Administrative County ..	0.75	0.95	0.74	0.53	0.50	0.69	0.66	0.56	0.54	0.48

On Table X are set forth the rates of these as they occurred in the County for the last ten years. The rate this year is the lowest on record. On Table XI are set forth the numbers of notifiable diseases which occurred in the different districts. There were 901 cases notified in the urban, 608 in the rural and 5 in the port districts, giving a total of 1,514 for the Administrative County. Excluding the 5 from the port of Plymouth, which were known to be imported, this gives a rate of 3.3 per 1,000. It is not possible to make comparisons with previous years as the figures are not obtainable.

SMALLPOX.

There were three cases of Small Pox notified ; these arrived in the port of Plymouth from South Russia, were treated on board the hospital ship in the Sound, and all recovered. With the present lax administration of the Vaccination laws and the tendency to repeal the most important provisions, the country is getting into a ripe state for the outbreak of serious epidemics. This condition is commented on by most of the Medical Officers of Health. Dr. Noy Scott draws attention to the method of performing vaccination, as carried out by some of the Plymouth medical men. This consists in making only "one mark," which is of little value from a protection point of view, and is contrary to the instructions of the Local Government Board.

TABLE XI.

1908

NOTIFIABLE DISEASES.

(LOCAL GOVERNMENT BOARD TABLES III. AND IV.)

DISTRICTS.	Population estimated by Medical Officer of Health.	Small Pox.		Scarlet Fever.		Diphtheria and Membranous Croup.		Fever.		Puerperal Fever.		Erysipelas.		Total.						
		Cases.	Deaths.	Hospital Cases.	Cases.	Deaths.	Hospital Cases.	Cases.	Deaths.	Hospital Cases.	Cases.	Deaths.	Hospital Cases.	Cases.	Deaths.	Cases.	Deaths.			
URBAN.																				
Asburton	2660	..	..	..	8	..	..	..	..	..	..	..	..	..	..	..	8	..		
Bampton	1649	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	2	..		
Barnstaple	14418	..	..	..	54	2	..	..	..	..	..	..	..	..	..	..	76	4		
Bideford	9375	..	..	..	22	..	..	..	..	..	..	..	..	..	..	..	37	1		
Brixham	8900	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4	..		
Buckfastleigh	2450	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	..		
Budleigh Salterton	2160	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	5	..		
Crediton	3930	..	..	..	4	..	..	..	..	..	..	..	..	..	..	..	5	..		
Dartmouth	7052	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	6	2		
Dawlish	4000	..	..	..	8	..	..	..	..	..	..	..	..	..	..	..	11	1		
Exmouth	11548	..	..	..	65	..	..	..	..	..	..	..	..	..	..	..	85	1		
Heavitree	10956	..	..	..	27	..	..	..	..	..	..	..	..	..	..	..	41	2		
Holsworthy	1371	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	2	..		
Honiton	3230	..	..	..	3	..	..	..	..	..	..	..	..	..	..	..	19	2		
Ifracombe	9000	..	..	..	21	..	..	9	..	..	..	..	..	..	..	..	28	..		
Ivybridge	1575	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..		
Kingsbridge	3011	..	..	..	6	..	..	..	..	..	..	..	..	..	..	..	5	..		
Lynton	1750	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..		
Newton Abbot	13550	..	..	..	4	2	..	65	5	42	6	1	3	..	..	3	..	79	7	
Northam	5584	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	6	..		
Okehampton	2900	..	..	..	7	..	..	..	..	..	..	..	..	..	..	..	8	..		
Ottery St. Mary	3495	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	39	..		
Paignton	9750	..	..	..	38	..	..	..	..	..	..	..	..	..	..	..	2	..		
Salcombe	1820	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..		
Seaton	1400	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	3	..		
Sidmouth	5000	..	..	..	27	..	18	1	..	..	..	..	..	..	..	..	31	..		
South Molton	2700	..	..	..	8	..	..	..	..	..	..	..	..	..	..	..	12	3		
Stonehouse, East	15000	..	..	..	6	..	3	..	8	1	2	..	..	..	..	4	2	24	3	
Tavistock	4842	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Teignmouth	8675	..	..	..	9	1	..	..	26	3	3	10	1	3	2	..	1	..	48	5
Tiverton	10382	..	..	..	..	..	..	..	45	..	..	..	..	..	..	..	2	..	47	..
Torrington, Great	3241	..	..	..	..	..	..	..	3	..	..	2	..	..	..	..	1	..	6	..
Torquay	34050	..	..	..	114	..	48	99	12	80	16	4	9	..	..	..	3	..	232	16
Totnes	4034	..	..	..	2	..	..	4	1	..	..	..	..	..	..	..	6	1	..	..
Totals	225458	..	..	..	444	3	80	313	32	128	65	9	17	7	1	72	5	901	50	
RURAL.																				
Axminster	12203	..	..	..	19	..	..	6	..	..	2	1	..	..	..	..	8	..	35	1
Barnstaple	16754	..	..	..	67	1	..	9	..	..	6	..	..	..	..	..	5	..	87	1
Bideford	6400	..	..	..	6	1	..	1	..	..	..	..	..	..	..	..	6	..	14	2
Broadwoodwidger	2376	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..
Crediton	11320	..	..	..	34	3	..	6	1	..	..	..	..	..	..	..	2	..	43	5
Culmstock	3250	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..
Holsworthy	7316	..	..	..	3	..	..	2	..	..	..	..	..	..	..	..	5	..	12	2
Honiton	9318	..	..	..	9	..	..	48	3	..	2	..	..	..	..	..	2	..	62	4
Kingsbridge	11366	..	..	..	15	..	..	4	1	..	4	..	..	..	..	..	2	..	25	1
Newton Abbot	18902	..	..	..	11	2	..	30	3	16	4	..	..	3	..	..	4	..	50	3
Okehampton	13000	..	..	..	14	..	..	1	..	..	..	..	..	..	..	..	6	..	20	..
Plympton St. Mary	22200	..	..	..	15	1	..	26	1	3	5	1	1	..	..	..	6	..	52	2
South Molton	10440	..	..	..	13	..	..	1	..	..	2	1	..	..	..	..	4	..	21	..
St. Thomas	23920	..	..	..	40	3	28	30	5	8	8	..	..	..	..	..	27	..	106	9
Tavistock	16695	..	..	..	9	..	..	1	2	..	..	..	..	..	..	..	3	..	13	3
Tiverton	15200	..	..	..	8	..	4	10	..	2	..	..	..	..	..	..	3	..	22	3
Torrington, Great	9300	..	..	..	..	..	..	8	2	..	2	1	..	..	..	..	5	..	15	3
Totnes	12848	..	..	..	4	..	..	13	1	..	8	2	..	..	..	..	3	..	28	3
Totals	222808	..	..	..	267	8	35	197	19	29	45	9	5	8	6	91	2	608	44	
PORT.																				
Barnstaple	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Dartmouth & Totnes	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Exeter	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Kingsbridge & Salcombe	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Plymouth	..	..	..	..	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Teignmouth	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Totals	..	..	..	..	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Administrative County	448266	3	..	..	3	711	11	115	510	51	157	112	18	24	15	7	163	7	1514	94

SCARLET FEVER.

This disease has been present during the year in 32 out of the 52 districts (equally in the urban and rural). There were 711 cases notified (urban, 444 and rural, 267), with 11 deaths. Last year 703 cases were notified with 11 deaths. The largest epidemic prevailed in Torquay, where 114 cases were reported, against 55 for the previous year. It was due to school influences but there were no fatal results. Sixty-five cases occurred at Exmouth. Dr. Eaton attributes these to an infected milk supply. At Okehampton, Dr. Young reports a few mild cases after the disease had been absent for two-and-a-half years. The other districts chiefly affected were Barnstaple, St. Thomas, Paignton, Crediton (Cheriton Fitzpaine) and Plympton. For the latter, Dr. Noy Scott draws attention to the little understood method of spreading infection by discharges from the ears and noses of convalescent cases ; whilst Dr. Vickers, for Paignton, lays stress on the advantage of Hospital Isolation. He says, "When the patient was removed to hospital no second case occurred in the infected house ; whilst the reverse was the case in the houses of those treated at home."

The control of Scarlet Fever, on account of its mildness of type in late years, is very difficult to maintain. The spread is generally brought about by school influence, for many of the infected children, not feeling ill enough to give up their attendance, are to be found desquamating in the schools, or having infectious discharges from their noses and ears.

DIPHTHERIA.

During the year this disease has prevailed in 36 out of the 52 districts. There were 510 cases notified (313 in the urban, and 197 in the rural), with 51 deaths, giving a death-rate of 10 per cent. of cases notified. Last year 427 cases were notified with 37 deaths. The largest outbreak occurred at Torquay, where Dr. Dunlop reports, that after many years of immunity, the Borough suffered considerably. Ninety-nine cases occurred in 13 public and 3 private schools, with 12 deaths ; these were due to personal infection. In the Newton Abbot area, Dr. Mapleton had 65 cases notified to

him. He attributes the spread to school influence ; that is, healthy children acting as "carriers." He succeeded in getting 42 cases removed to hospital, and spent much time in resorting to bacteriology and antitoxin treatment, with the result that only 5 cases had a fatal termination. In Tiverton (urban) Dr. Cullen reports 47 cases. Twenty-seven of these were removed to hospital. With the result of this procedure, and the free use of antitoxin treatment, no fatal results occurred. At Teignmouth, Dr. Piggott reports an unusual prevalence of this disease. Twenty-six cases were notified, and were due to school infection. He advises prosecution under Section 126, Public Health Act, 1875, for wilful neglect of precautions. At Stonehouse there were 8 cases notified among school children ; Dr. Leah considers these were due to the infection being spread by means of slates and pencils. In the Plympton St. Mary district there were 26 cases notified, most of them in the neighbourhood of St. Budeaux, where Dr. Noy Scott complains of the insanitary condition of the roads adjoining the houses. Dr. Young reports that there have been no cases of Diphtheria in the Okehampton urban district for nine years, and only one (imported) case in the rural district for two years.

TYPHOID FEVER.

There were 112 cases notified (65 in the urban, 45 in the rural, and 2 in the port districts), with 18 deaths, against 130 cases notified and 20 deaths for last year. The disease was distributed in 25 districts. The largest numbers occurred in Torquay, where 16 cases were reported, and at Teignmouth where 10 cases were notified. In the former place, two cases were traced to eating shell fish, and at the latter place Dr. Piggott considers all the cases due to eating contaminated cockles. No special comments were made as to the cause of the other outbreaks, except that they were due to sanitary defects, but from statistics obtained the fact stands out, that in 9 of the 25 districts affected, the Medical Officers of Health state the origin to be due to the eating of polluted shell fish. This is a matter seriously to be considered by the different Authorities which have tidal waters in their districts.

Another cause, not sufficiently recognised, is the fact that many people who have had Typhoid in past years, may be at times, although quite well in themselves, carriers of this disease. A case was reported at Bristol where a woman, who had Typhoid nine years ago, was found propagating the disease. Another point is, that other secretions from the human body otherwise than the one usually recognised, may convey the infection. Dr. Young reports, as in the case of Diphtheria, that there has been no cases of Typhoid notified in the Okehampton urban district for nine years. Dr. Ubsdell reports the same at Buckfastleigh for four-and-a-half years, and Dr. Beesley, Budleigh Salterton, for four years.

DIARRHOEA.

There were 76 deaths registered during the year (53 in the urban, and 23 in the rural), against 79 for the previous year. In only 5 out of the 52 districts is any mention made of this subject. Dr. Young mentions the influence of flies in causing the disease. Dr. Harper says, "This disease has been absent to a marked degree in Barnstaple."

In past years much has been written about epidemics of Diarrhoea and their infectious nature. Now it is known to be due chiefly to insanitary surroundings and contaminated food. When the knowledge of the influence of flies, as carriers of filth from ash pits and collections of stable manure is more fully appreciated, we shall hear still less of this disease.

MEASLES.

During the year there have been 50 deaths registered in the county (28 in the urban, and 22 in the rural), against 98 for the previous year. No mention is made of this disease in 37 districts, although 30 schools were closed on account of its prevalence during the year. In those districts in which the disease is mentioned, it does not appear to have been of a severe type, except in both the Newton Abbot areas, where the disease was widely prevalent, and caused 19 deaths in the urban district. Dr. Farrant reports that there was a large amount of Measles in the St. Thomas district, necessi-

tating the closing of the elementary school in three places. Culmstock is the only district in which this disease is notifiable.

Much controversy has taken place concerning the addition of Measles to the compulsory notifiable list of infectious diseases. It is still a debatable subject, chiefly on account of the expense involved. The question being whether the gain is worth the money. This disease is unfortunately very infectious during the incubation period (when it is unrecognisable), and is generally spread by school attendance. At the first appearance of the disease notification would undoubtedly be of use. It would enable measures to be taken to exclude classes or close departments of schools. As this disease is most fatal between the ages of three to five years, the closure of infant departments would postpone the age of attack, and thus diminish the mortality rate. Another advantage of notification would be the labelling of Measles as "a dangerous infectious disease," and so bring home to parents the necessity of careful treatment, and the avoidance of evil after-effects.

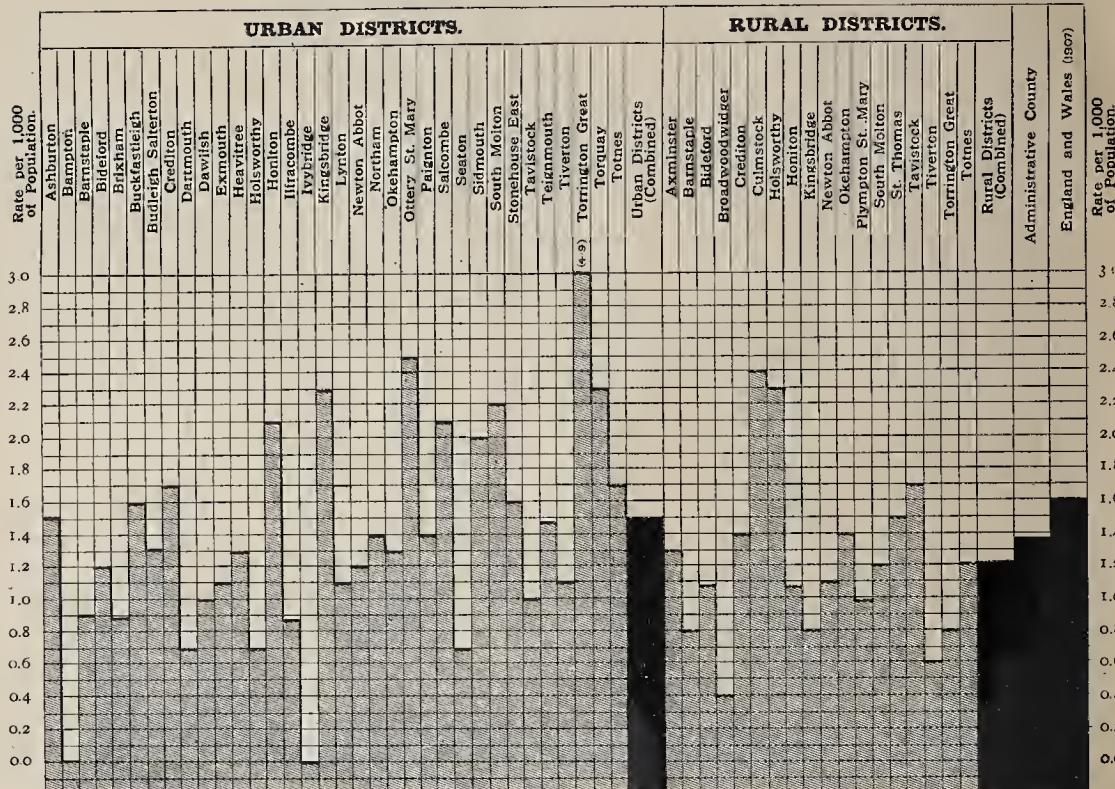
WHOOPING COUGH.

This disease caused 70 deaths during the year (35 in the urban, and 35 in the rural), against 61 for the previous year. No mention is made of this disease in 35 districts; but from the number of deaths, and the large number of schools closed (25) it must have prevailed to a great degree. Dr. Brodrick reports it as endemic, but with a small mortality rate in his district, this being due to the care taken of the children whilst suffering from the disease. Dr. Noy Scott reports it as prevalent in Cornwood. Dr. Mapleton reports a severe winter epidemic, combined with Measles in the Newton Abbot urban district. Seventeen deaths were reported from Totnes (urban). By the advice of the Medical Officer of Health, elementary schools were closed at Halwill in the Holsworthy district, and at Newton Poppleford, Colaton Raleigh and Powderham in the St. Thomas district on account of this disease. Dr. Webb regrets that Whooping Cough and Measles, are not notifiable in his areas; whilst Dr. Date rejoices in having persuaded his Authority at Culmstock to add this disease, with Measles, to his list of notifiable diseases. This notifi-

TABLE XIII.

TUBERCULOSIS DEATH-RATE.

TABLE XIII.
1908.
TUBERCULOSIS DEATH-RATES.



cation came in force on June 1st and was sanctioned for five years by the Local Government Board.

TUBERCULOSIS.

Under this heading are included all the diseases caused by the tubercle bacillus, the chief amongst which is Phthisis. From this latter disease there were 479 deaths in the county; but there were 142 deaths due to the presence of the bacillus in other organs of the body, giving a total of 621 deaths (344 in the urban, and 277 in the rural districts), with a rate of 1.38 per 1,000 as against 1.60 for England and Wales (1907).

TABLE XII.

DEATH-RATES.

Districts.	Rates per 1,000 of Population.									
	1899	1900	1901	1902	1903	1904	1905	1906	1907	1908
Urban	1.32	1.22	1.41	1.53	1.35	1.37	1.37	1.37	0.98	1.52
Rural	0.89	0.97	0.97	0.96	1.05	1.07	0.97	0.85	0.98	1.24
Administrative County ..	1.10	1.09	1.19	1.24	1.20	1.22	1.17	1.11	0.98	1.38
England and Wales ..	1.90	1.90	1.80	1.74	1.74	1.77	1.63	1.64	1.60	

On referring to Table XII, it will be seen that the rate for the last ten years in the urban districts is much the same. There is a slight increase in the rural rates during this decennium, and the combined rate for the whole county is greater than any rate for the ten years recorded.

The columns in Table XIII, are very irregular in both districts. The explanation of this can only be accounted for by the rates being taken from small figures, with the exception of Great Torrington (urban). Here the rate (4.9 per 1,000) is nearly double that of any other district. On investigating this matter, it is found that no precautions are taken to prevent the infection among members of a family in houses.

in which the disease appears. "Heredity" is the only answer that can be obtained as a cause. This is a matter, concerning which, the Council should take immediate action. It is difficult to draw conclusions as to the prevalence of the disease in this county and to compare it with other counties; but from its climate, and number of health resorts, it is probable that the importation of tuberculosis is greater than the exportation.

There is a hope that, at last, some response is to be given to the King's question in regard to this disease, "Why not prevented"? Our legislators have begun to move.

Tuberculosis is now made compulsory notifiable among Poor-law cases, and in addition the following provisions are advised:—

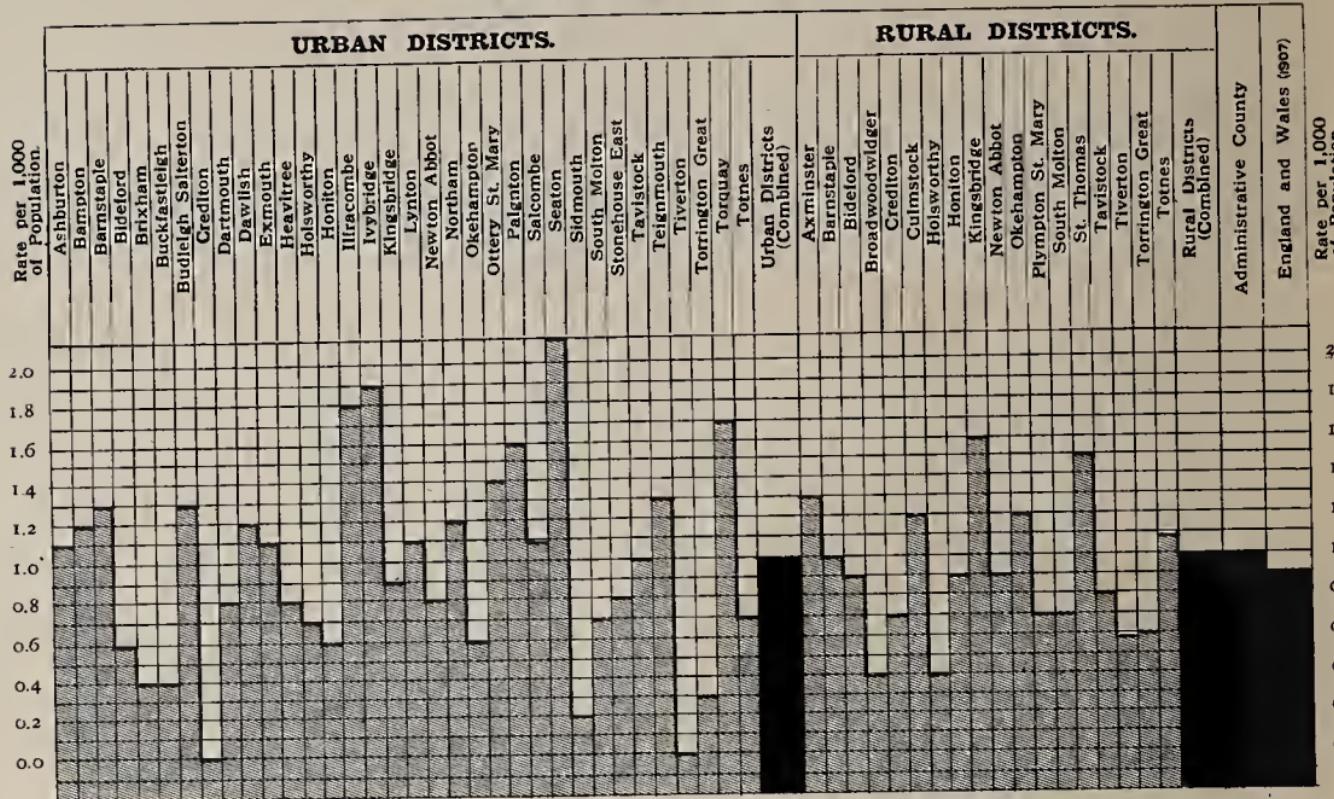
1. Destroying or disinfecting of infected articles.
2. Cleaning or disinfecting of premises.
3. Supplying such assistance, facilities or articles, as within reasonable limits the circumstances of the case requires or allows, will obviate or remove or diminish the risk of infection arising from the conditions affecting the use of a room when used or occupied by the poor person as a sleeping apartment.
4. Furnishing for the use of the poor person on loan or otherwise any appliance, apparatus or utensil which will be of assistance for the purpose of any precautions *against the spread* of the infection.

Tuberculous animals and meat are to be subject to the control of the Board of Agriculture; whilst greater power for dealing with tuberculous milk and food is to be conferred on Sanitary Authorities. With an extension of powers in these three directions, the spread of sanitary knowledge in regard to the advantages of fresh air, sunlight and cleanliness and generally treating tuberculosis as any other "dangerous infectious disease," we may hope that this "white plague," the most preventable of diseases, may at no distant date be as extinct as Bubonic Plague or Typhus Fever in Europe.

TABLE XV.

CANCER DEATH-RATES.

TABLE XV.
1908.
CANCER DEATH-RATES.



CANCER.

During the year 463 deaths (241 in the urban, and 222 in the rural districts) were registered from this disease, giving a rate of 1.03 per 1,000. On referring to Table XIV, it will be seen that this is the highest rate for the last ten years, although the difference is very slight for the last eight years. This refers to the urban and rural districts alike, although the rate, as might be expected, on account of the health resorts, is somewhat higher in the former. This is brought out on reference to Table XV, where the fallacies in dealing with small numbers are again illustrated.

The death-rate from this disease has been practically one decimal point higher than that for England and Wales for each year since 1901.

TABLE XIV.

DEATH-RATES.

Districts.	Rates per 1,000 of Population.									
	1899	1900	1901	1902	1903	1904	1905	1906	1907	1908
Urban	0.68	0.76	1.11	1.02	1.10	1.02	0.99	1.02	0.95	1.06
Rural	0.60	0.78	0.77	0.89	0.90	0.95	0.94	0.83	0.98	0.99
Administrative County ..	0.64	0.77	0.94	0.96	1.0	0.99	0.98	0.91	0.97	1.03
England and Wales ..	0.82	0.82	0.84	0.84	0.87	0.87	0.88	0.91	0.90	

The Cancer Research Associations have not, as yet, been able to state the exact cause of the disease, but the tendency is to attribute it to injury altering cell formation and habit. It will be along the lines of early recognition, and the avoidance of internal irritation that any abatement of this dreaded disease will be accomplished.

HOUSE ACCOMMODATION.

This subject is fully dealt with by most of the Medical Officers of Health. Many cases of overcrowding are reported, and have been remedied without resorting to legal procedure. Beginning with the urban districts, Dr. Eaton says, "There is a great deficiency of houses for the working-classes at Exmouth." Dr. Gray says, "Twenty-five houses are urgently required" at Holsworthy. Dr. Wigham reports a want of cottages for large families in South Molton. Dr. Ubsdell complains of the small size of the bedrooms at Buckfastleigh. Dr. Elliott mentions the improvement carried out at Brixham by pulling down the old houses and widening Fore street. Dr. Toye, in reporting on the matter of tuberculosis at Appledore, again draws the attention of his Authority to the narrow streets and back-to-back houses with small windows that do not open, as factors in the prevalence of the disease. Dr. Pullen lays stress on the advantages of semi-detached houses, in preference to rows of houses, as affording facilities for removing house refuse, providing more air space and better ventilation.

In the rural areas, complaints of deficiency of houses are made in five districts—Barnstaple, Bideford, Holsworthy, (a deficiency in every parish), Okehampton (chiefly at Chagford and Belstone) and Tiverton. For the latter Dr. Pollock says, "There is want of three or four-roomed houses throughout the whole district." The Medical Officers of Health for Crediton, South Molton and Okehampton give prominence to the substitution of paved for cobble floors in old cottages. Dr. Body has been especially active in bringing about this improvement in his district.

WATER SUPPLY.

This very important matter naturally receives a large amount of attention from the Medical Officers of Health; not so much in the directions of water-borne diseases, as in the necessity of an ample supply and proper distribution of the drinking water and in its not being liable to pollution. These three requirements are most essential for the maintenance

of a healthy condition of body, in order to resist the attacks of microbic diseases.

The liability to pollution is much in evidence in some of the rural districts, notably at Barnstaple, Bideford, Broadwoodwidger, Culmstock, Holsworthy, Honiton, Tiverton and Great Torrington, where surface wells are the chief sources of drinking water. Considering our present state of sanitary knowledge, this condition should not be tolerated, but every village should have a sufficiently distributed supply brought in from outside.

In the Axminster district, Dr. Langran complains that the Hawkchurch scheme is not carried out, and that the supply at Axminster is liable to contamination on account of the pipes being laid in a polluted stream. Dr. Webb reports on the urgent necessity of an improved distribution of the water supplies for Aveton Gifford, Kingston and Stoke Fleming in the Kingsbridge rural district. Dr. Mapleton is desirous that some means may be taken to remove the legal difficulties connected with the proposed scheme for Ilsington.

In the Okehampton rural district a scheme for the better supply of South Zeal is to be carried out, and the supply at North Tawton is to be augmented. Dr. Noy Scott draws the attention of his Authority to the need of an increased supply of water for Plympton and Plymstock, and the urgency of a new supply for Newton Ferrers in the Plympton district. Dr. Brodrick again reports on the need of a new supply for Whitchurch, Petertavy and Marytavy in the Tavistock district. For the Totnes rural district, Dr. Johnson reports that the supply is still deficient at Ugborough and Marldon, and that Stoke Gabriel requires a new supply.

Improvements in the water supplies of Bradninch, Dolton, Winkleigh, Beaford and High Bickington have been carried out.

In the Urban districts, Dr. Harper for Barnstaple speaks of the great advantage of the "settling reservoirs." This is a subject which is at present engaging the attention of the London Water Companies, as an improved means of purification.

Dr. Gooding again brings forward the necessity of an

efficient permanent supply for Bideford. Dr. Harris advises his Authority to purchase the water shed at Dartmouth, in order to remove the farms and inhabited buildings, which at present render the water liable to pollution. Dr. Eaton again lays stress on the question of the deficiency of the supply at Exmouth. Dr. Gray states, that after sixteen years' agitation, he is now able to report a new supply of water for Holsworthy. The Ivybridge water supply is engaging the attention of the Council on account of its shortage, due to the water being required for the Paper Mills. Dr. Edwards suggests the provision of new storage for Lynton, to overcome the trouble from storm water, when the river is in flood. At Paignton Dr. Vickers advises that provisions should be made for obtaining drinking water from the mains instead of from the cisterns. For South Molton Dr. Wigham recommends better filtration, and the covering in of the reservoir to prevent vegetable contamination ; whilst for Teignmouth, Dr. Piggott strongly recommends the substitution of a constant for the present intermittent supply.

In the Memorandum issued by the Local Government Board to the Medical Officers of Health, they are requested to report on the plumbo-solvent properties of the water supplies. Many of the Medical Officers have found the water to be so in a mild degree, but not so much as might be expected in the soft peaty waters of Dartmoor and Exmoor. These are found to contain very little free vegetable acid. No cases of lead poisoning from this cause are in evidence, but owing to the far-reaching deleterious effects on the general health by this metal, it would be wise to avoid, as much as possible, its use in connection with these soft waters.

In order to bring into prominence the chief water supplies which require attention, the following list has been drawn up :—

AXMINSTER	-	- Hawkchurch scheme not carried out. Axmouth water pipes laid in polluted stream.
BIDEFORD (URBAN)		- Increased supply required for upper part of town.

DARTMOUTH	-	- Purchase of water shed to prevent pollution by farms and inhabited houses.
EXMOUTH	-	- Increased supply required.
HONITON (RURAL)	-	- Shortage at Salcombe Regis.
IVYBRIDGE	-	- Increased supply required.
KINGSBRIDGE (URBAN)	-	- Better distribution required.
,, (RURAL)	-	- Better distribution required for Aveton Gifford, Kingston and Stoke Fleming.
LYNTON	-	- Means to prevent pollution by storm water.
NEWTON ABBOT (RURAL)	-	New supply for Ilsington.
PLYMPTON ST. MARY	-	Additional supply required for Plympton, Plymstock and Newton Ferrers.
SOUTH MOLTON (URBAN)	-	Better filtration and covering in of reservoir to prevent vegetable pollution.
TAVISTOCK (RURAL)	-	New supply for Whitchurch, Petersavy and Marytavy.
TOTNES (RURAL)	-	New supply for Ugborough, Stoke Gabriel, Scorriton and Marldon.

MILK SUPPLY.

The growing prominence given to the provision of a pure milk supply, which has been urged upon time after time by the medical profession, is now about to take shape through the introduction of an Act of Parliament for this purpose, coupled with an Order of the Board of Agriculture in regard to tuberculous cows. In the reports of the different Medical Officers of Health, stress is laid on the precautions to be taken to prevent the introduction of deleterious substances into the milk from the time it leaves the cow until it reaches the consumer. The chief precautions are the cleansing of the cows' udders, the cleanliness of the milkers and milking utensils, the conditions of the storage, the means adopted to convey the milk to the houses of the consumers, and last, but not least,

the precautions necessary to be taken in the houses to prevent contamination by injurious gases and flies.

At Axminster, Dr. Langran says that a large number of dairymen are not complying with the regulations. Dr. Date reports that none of the keepers of the dairies, cowsheds, or milkshops are registered in Culmstock ; and Dr. Reynolds complains that there are still some unregistered dairymen in Ottery St. Mary. Drs. Gray and Young report that there is very little tubercular disease among the cattle in their districts. Dr. Piggott suggests the desirability of again applying the tuberculin test at Teignmouth. The insanitary conditions and want of cleanliness in the cowsheds are reported on in different parts of the county. Dr. Eaton says that in Exmouth the cowsheds are filthy, and the cows and milkmen anything but clean. For some of the districts the Medical Officers of Health suggest that printed instructions for dealing with these conditions should be hung up in the sheds. This procedure has already been carried out at Newton Abbot and Dawlish, by the advice of Dr. Mapleton ; whilst this officer gives a lengthy account, in his report, of his visit to Denmark, where he inspected all the measures taken by that advanced country to secure a pure milk supply. In seven only of the urban districts, viz., Barnstaple, Bideford, Brixham, Heavitree, Ilfracombe, Paignton and Torquay is any mention made of the taking of samples of milk for analysis. No samples were reported to be taken in any of the rural districts. This is a very serious matter, and should receive the attention of the different Councils.

SEWERAGE.

Much work in this direction has been done in the different districts in the way of laying down new and the reconstructing of old sewers. Dr. Johnson reports the sewer at St. Laurence, Ashburton, as being unsatisfactory. Dr. Beesley complains of the pollution of the foreshore by the outfall sewers at Budleigh Salterton. The drainage at Fordton, Crediton, has not yet been dealt with, and flushing cisterns are required in other parts of the town. A new scheme, costing £4,000, is to be carried out at Dawlish. Dr. Eaton again calls the attention

of his Authority to the unsatisfactory condition of the outfall sewers at Exmouth. At Heavitree, a public urinal has been erected and the construction of others is contemplated. The drainage of Holsworthy still remains in the same unsatisfactory condition. The flushing arrangements at Kingsbridge (urban) are still deficient ; and Dr. Pullin complains of the same trouble at Sidmouth. For this latter place he advises the erection of some public conveniences. At Okehampton, the outfall sewer is to be extended $1\frac{1}{2}$ miles, to prevent the pollution of the river Okement ; and for this district Dr. Young recommends the erection of a public urinal for the use of the large numbers of soldiers visiting the town. Dr. Pattinson advises the extension of the outfall sewer at Seaton in order that it may be always under water. At Teignmouth, public urinals have been erected, and a new sewer is required in the Dawlish Road, to prevent the pollution of a water course.

Rural districts. Plans for the drainage of Axminster are now before the Local Government Board, but Dr. Langran lays stress on the need of this scheme being carried out as speedily possible. New houses are being built and the open sewers in the town are a public nuisance, and dangerous to health. No steps have been taken to remedy the drainage of Colyton.

The proposed new sewer for Culmstock is still under the consideration of the Local Government Board. The new drainage at Sidmouth Junction has been carried out to remedy the often complained of nuisance at that place.

Dr. Webb says for Kingsbridge, that the drainage of Modbury, which he has reported on continually for several years is still in abeyance, and the proper sewerage of a portion of the village of Sherford is urgently needed. The remedying of the defective drainage of South Zeal in the Okehampton district is postponed until the new water supply is finished. Dr. Noy Scott reports on the necessity of new drainage works being carried out at Elburton, Roborough and Westlake in the Plympton district. In Tavistock, Dr. Brodrick complains of the want of drainage at Clearbrook, Walkhampton and Dousland. A system of drainage is required for Galmpton in the Totnes area.

The following is a list of the districts in which an unsatisfactory condition of the drainage exists :—

AXMINSTER	-	- New system urgently required for the town, and for Colyton.
ASHBURTON	-	- Sewer at St. Laurence Lane requires attention.
BAMPTON	-	- Sewers discharge into streams.
BUDLEIGH SALTERTON	-	- Pollution of foreshore by outfall sewer.
CREDITON (URBAN)	-	- Fordton drainage not carried out.
CULMSTOCK -	-	- New sewer required at Millmoor.
EXMOUTH	-	- Outfall sewer unsatisfactory.
HOLSWORTHY (URBAN)	-	- Sewerage still unsatisfactory and polluting the streams.
KINGSBRIDGE (URBAN)	-	- Flushing system requires attention.
,, (RURAL)	-	- Drainage of Modbury and Sherford not carried out.
OKEHAMPTON (RURAL)	-	- New sewer at South Zeal required.
PLYMPTON ST. MARY	-	- New sewers required for Elburton, Roborough and Westlake.
SIDMOUTH	-	- Flushing of sewers unsatisfactory.
SEATON	-	- Outfall sewer requires extending.
TAVISTOCK (RURAL)	-	- New sewers required for Clearbrook, Walkhampton and Dousland.
TEIGNMOUTH	-	- New sewer required in the Dawlish Road.
TOTNES (RURAL) -	-	- New sewer required at Galmpton.

SALE OF FOOD AND DRUGS ACT.

From a perusal of the reports, this matter seems to be almost a dead letter as far as the Sanitary Authorities are concerned.

In nine of the urban districts only is any mention made of this subject ; and in all but two of these, the Police were the only officials who took samples. In three only of the rural districts is the matter reported upon, the Police taking action at Tiverton ; whilst at Honiton and Kingsbridge the Medical Officers of Health complain that no samples are taken.

This is a condition that should be remedied, for during the year only 476 samples were taken in the county, and of these, but a few by the Officers of the Local Authorities. The total number of samples gives a rate of 1.6 per 1,000 inhabitants, which is below the "*minimum*" numbers recommended by the Local Government Board (2 per 1,000). Twenty-nine of the samples analysed were found to be adulterated.

POLLUTION OF RIVERS.

Complaints are made of the pollution of streams by sewage at Bampton, Holsworthy, Teignmouth and Broadwoodwidger. The sewage tanks erected at Honiton have remedied the pollution of the river Otter. That of the Okement is to be removed by the extension of the outfall sewer at Okehampton. Filter beds have been erected to remove the pollution by gut scraping outside the town of Holsworthy ; whilst means have been taken to prevent the pollution of the Byre stream by house refuse at Sidford.

SCAVENGING.

In 7 of the 18 rural districts some method of public scavenging is carried out in the more populated areas. In the other parts, reliance is placed on the inhabitants making use of their refuse for garden purposes. In the urban districts the refuse is collected either daily, or two or three times a week, according to the season of the year. Dr. Johnson complains of the want of a covered cart for this purpose at Ashburton. Dr. Harris reports, that owing to the difficulty of getting rid of the refuse at Dartmouth, a destructor is required. The same complaints come from the Medical Officers of Health for Ilfracombe, Sidmouth, Stonehouse, and Paignton. In the two latter places the Medical Officers speak of the urgency of their requirement. The need for covered ashbins is reported from Exmouth, Kingsbridge and Okehampton. Dr. Brodrick reports, that since the scavenging of Tavistock has been remedied, there is a great improvement in the cleanliness of the town.

SLAUGHTER HOUSES.

In the rural areas there are reports of 12 districts, in which the slaughter houses are regularly inspected, and generally found satisfactory. No mention is made of this subject in the other 6 areas.

In the urban districts mention is made of 4 public slaughter houses only in the 34 districts, and these are situated at Bideford, Holsworthy, Ilfracombe and Newton Abbot. This means that there are a great number of private slaughter houses. The reports on these are satisfactory as to cleanliness, but the general opinion is that they should all be abolished and public abattoirs erected in their places. Carcasses of diseased animals have been condemned at Barnstaple, Heavitree and Tiverton. At the latter place a serious outbreak of Ptomaine poisoning occurred from this cause. It is now generally recognised that the danger to health arising from meat unfit for human consumption, can only be remedied by the abolition of private slaughter houses, and the more effectual inspection of this form of food supply.

BAKEHOUSES.

In 9 of the rural districts the bakehouses have been regularly inspected and found satisfactory. No mention is made of any inspection in the other 9 areas.

In the urban areas all but 14 of the districts were inspected and reported to be satisfactory. Painting and whitewashing seem to be carried out regularly. There are no underground bakehouses reported to be in existence.

FACTORY AND WORKSHOPS.

The provisions of the "Factory and Workshops Act, 1901," which imposed extra duties on the Medical Officers of Health, have been carried out in all the districts. The reports reveal a satisfactory condition of affairs in connection with this matter. In the Plympton district Dr. Noy Scott says, "The greatest complaint is the insufficiency of closet accommodation." At Bideford Dr. Gooding draws the attention of his Council to the non-compliance with the

orders for the half-yearly list of "outworkers." Dr. Harris complains of the same at Dartmouth. Some sanitary improvements are reported to have been carried out at Dawlish, Heavitree and Okehampton.

BYE-LAWS, Etc.

In all the rural districts except 5 (Axminster, Broadwoodwidger, Crediton, Holsworthy, Kingsbridge and the largest part of Totnes) building bye-laws are in operation and are working well. In 3 of these, viz., Barnstaple, Newton Abbot and Plympton, bye-laws for regulating slaughter houses, offensive trades, and the prevention of nuisances are in force. At Bampton new bye-laws and parts 2 and 3 "Public Health Acts Amendment Act, 1890," have been adopted. The chief sections of this Act provide for sanitary conveniences, the paving of back yards, throwing injurious matter into sewers, removal of house refuse and the wholesome condition of sites for new buildings. At Bideford and Heavitree, section 22 of this same Act (which deals with sanitary conveniences for workshops) has been put in force. At Ilfracombe new bye-laws for the prevention of nuisances from snow, filth, dust and ashes have been adopted, as well as those dealing with animals kept near dwellings. At Teignmouth the "Public Health Acts Amendment Act, 1907," has been adopted in its entirety. This Act contains many useful provisions for dealing with ventilating shafts, infected clothing, the notification by dairymen in regard to infectious diseases, the attendance at school of children suffering from these diseases, the control of infected books in libraries, the disinfection of premises and the regulation of common lodging-houses. Dr. Piggott reports that bye-laws are required for dealing with bungalows.

No mention is made of the adoption of the "Notification of Births Act, 1907," in any of the districts. This measure was passed with a view to lessen infant mortality, but several of its administrative provisions do not meet with the approval of medical men.

MIDWIVES ACT, 1902.

During the year 350 midwives were registered in the county, of whom 104 were qualified by examination to practise.

The remaining 246 (admitted as being in practice before the Act came in force) belong to the class deficient in technical skill.

The duties of inspecting the work, appliances, and homes of the midwives, were carried out by the Medical Officers of Health, whose reports reveal that many of those certified by virtue of being in practice before the Act came in force, were unable to fill up their registers, and use the ordinary appliances. Some were found to be wearing unwashable dresses. Forty-seven had special complaints made against them.

Fifteen cases of Puerperal Fever, with 7 deaths, were notified during the year, against 21 cases notified, with 8 deaths, for the preceding year. A Departmental Committee of the Privy Council is, at present, taking evidence as to the working of this Act, for it is apparent that some alterations will be required, when that part relating to the year 1910 comes in force. This will especially affect the sparsely populated parts of Devon. The County Medical Officer of Health attended a conference of County Medical Officers in London on February 12th, in connection with this matter.

ELEMENTARY SCHOOLS.

In the Memorandum of the Local Government Board of November, 1908, the Medical Officers of Health were requested to report annually on the sanitary condition of the elementary schools, including "water supply, action taken in relation to the health of the scholars and for preventing the spread of infectious diseases." This part of the Memorandum, issued ten months after the Education (Administrative Provision) Act, 1907, came in force, was evidently intended to remind Medical Officers of Health that their duties, in regard to the schools, were not to be relaxed, or substituted by the duties of the newly appointed School Medical Officers. In parts of the country where it was found possible to carry out the suggestions of the Local Government Board, the Medical Officer of Health became

the School Medical Officer. In the Devon area it was found impossible to do this, but the supervision of two services has been placed under one officer by appointing the County Medical Officer to be the "School Medical Officer," as recommended by the Board of Education, with the School Medical Inspectors working under him. The result of the Memorandum is, that in all except 18 of the districts, some mention is made of this subject.

Various sanitary defects, chiefly from Bideford, Budleigh Salterton, Lynton and Okehampton (urban) are reported, and means taken to remedy them.

During the year the following 80 schools have been closed for the different infectious diseases :—

Disease.	Closed by the Sanitary Authorities.	Closed by the Managers.
Scarlet Fever	.. Morebath.	Cheriton Fitzpaine. Fremington, Bickington. Sidmouth. Teburn St. Mary.
Diphtheria	.. Ashreigney Frithelstock. Newton Abbot.	Broadhembury. Ottery, West Hill.
Measles	.. Ashton. Branscombe. Berry Pomeroy. Christow. Colaton Raleigh. Marldon Newton Abbot (five schools) Stoke Gabriel. Talaton Teignmouth. Whitestone, Splatts' Whimble.	Abbotskerswell. Ashwater. Awliscombe. Bicton. Bishopsnympton. Bovey, Heathfield. Chudleigh. Drewsteignton. Dunsford. Hennock. Hennock, Chudleigh Knighton. Ideford. Lustleigh. Moretonhampstead. Northam. North Bovey. Trusham. Wembworthy & Eggesford.

Disease.	Closed by the Sanitary Authorities.	Closed by the Managers.
Whooping Cough ..	Colaton Raleigh. Cadeleigh Holsworthy, Chilla Halwill. Newton Poppleford. Powderham. Thurlestone	Ashwater, Hunscott. Black Torrington. Bovey, Heathfield. Bratton Clovelly. Chudleigh. Chulmleigh. Hennock. Hennock, Chudleigh Knighton. Iddesleigh & Dowland. Lamerton. Milton Abbot. Morchard Bishop. Plympton St. Mary, Sparkwell. Rockbeare, Marsh Green. Sandford, East Village. Southleigh. Sydenham Damarel. Wembworthy and Eggesford. Winkleigh. Winkleigh, Hollacombe.
Mumps ..	Ashwater. Broadwoodwidger, Ivyhouse.	Meavy. Plympton St. Mary.
Influenza ..	Hartland	Bishopsnympton. Bradworthy. Chulmleigh. Dunkeswell Abbey. Highampton. Littlehempston. Marland St. Peter. Northlew & Ashbury.

The medical inspection of elementary school children, under the Education (Administrative Provision) Act, 1907, began on December 18th. For this purpose Mr. Tosswill was appointed for the Exeter, Mr. Cullen for the Plymouth and Mr. Goulden for the Barnstaple divisions. Mr. Corbett, who for eight years acted as School Medical Officer for Stonehouse, has taken charge of that town on account of the peculiar nature of its population. The details of the work of this department are submitted each month to the Education Committee, and an Annual Report will be presented to that body, as required by the Board of Education.

METHODS OF DEALING WITH INFECTIOUS DISEASES.

In only 4 of the 18 rural districts are Isolation Hospital means provided for dealing with infectious diseases. The Newton Abbot and Tiverton councils have combined with the urban councils for a joint hospital. St. Thomas has made arrangements for the use of the Exeter Sanatorium, and Plympton has done the same in regard to the Plymouth Borough Hospital. In the remaining 14 districts isolation has to be carried out as well as possible in the homes. Various means of disinfecting by vapour and sprays are in use. For the urban areas, 13 only of these districts have made provisions for isolation hospitals. Barnstaple, Bideford, Buckfastleigh, Heavitree, Ilfracombe, Lynton, Newton Abbot, Paignton, Teignmouth, Tiverton and Torquay have hospitals of their own; whilst Sidmouth and Exmouth make use of the Exeter Isolation Hospital. The Bideford hospital only admits one kind of infectious disease at a time. At Heavitree extra accommodation is much needed. The Newton Abbot hospital is being enlarged to meet the increasing demand for isolation. Dr. Vickers says, "Owing to the number of unvaccinated children (50 per cent.), I fear another hospital will be required at Paignton." The Teignmouth hospital is used for urban and port cases. Dr. Webb says "A hospital for the combined Kingsbridge urban and rural and the Salcombe districts is much required." Dr. Leah reports that an isolation hospital for Smallpox cases at Stonehouse is urgently needed. Plympton St. Mary and Ilfracombe are the only districts reported to be provided with smallpox hospitals.

With a view to giving early notification to the District Medical Officers of Health, of the occurrence of infectious diseases which might affect their districts, your General Purposes Committee has allowed the County Medical Officer to adopt a means, by which he will receive a weekly notification of infectious diseases in the county. This information will be at once posted to all the District Medical Officers of Health, and by the courtesy of the Medical Officers of Health

of Exeter, Plymouth and Devonport this information will include the County Boroughs.

On enquiry as to the use of Bacteriology in dealing with infectious diseases, it was found that only in a few districts were provisions made by the Councils for this important help. On reporting this condition to your General Purposes Committee, and stating that out of the 32 counties in England and Wales, which had County Medical Officers, all except 8 had provided or were about to provide *free* Bacteriology for the use of the Medical Officers of Health and School Medical Inspectors, the Committee sanctioned the adoption of the same procedure, subject to your approval.

In many of the districts the Councils have provided antitoxin serum for the treatment of cases of Diphtheria. This is a most valuable procedure and should be universally adopted.

SYSTEMATIC INSPECTION.

In only 16 of the districts is this matter mentioned as being carried out, but doubtless it is done in the other districts, although not reported upon, as desired by the Local Government Board. In this connection it is necessary to draw the attention of the councils to the advantages that would accrue to all, who have to deal with the Annual Reports, if these were printed. This is also requested by the Local Government Board.

Table XVI (see end), contains a summary of the work carried out by the Inspectors of Nuisances, as gathered from the forms sent to them by the Council. All with two exceptions (the Inspectors of Honiton, who have refused the information), have filled up the forms, as the circumstances of each district would allow.

PORT DISTRICTS.

BARNSTAPLE.

During the year 107 vessels were inspected at this port, of which number 9 came from foreign ports. The inspections revealed no infectious diseases. A strict watch was kept for cases of Cholera, Plague and Yellow Fever.

The hospital ship, *Nymphen*, was kept in a good condition and ready for any emergency. The port is not used for the reception of foreign food, and therefore no action is required under the Public Health (Regulations as to Food) Act, 1907.

DARTMOUTH AND TOTNES.

During the year 518 of the 1,016 vessels visiting the port were inspected by the Port Sanitary Officers. Forty of these, coming from ports infected with Cholera, were personally inspected by the Medical Officer of Health, since the disease appeared in the Black Sea and Baltic Littoral, but no suspected cases were discovered. Dr. Harris reports the hospital ship to be in a good serviceable order and ready for use at any time. There has been no occasion to use it for the twelve months.

EXETER.

Of the 171 vessels visiting this port, 83 came from foreign ports. Dr. Eaton says he inspected all those coming from the Baltic, in order to detect any evidence of Cholera. No infectious diseases were found in any of the vessels inspected, and the isolation hulk was not used during the year. He also remarks that the accommodation for the crews of the foreign ships was superior to that of most of the British.

KINGSBRIDGE AND SALCOMBE.

During the year 656 sailing and steamships visited the port, of which number 38 were inspected. Three of these came from foreign ports, but no cases of infectious diseases were reported. Dr. Pearce mentions that there is no isolation accommodation, no disinfecting apparatus, no boat for the Inspector, and no means provided for carrying the sick ashore.

There has been no unsound food or foreign meat imported.

TEIGNMOUTH.

During the year 876 vessels entered the port, of which 250 were inspected by the Sanitary Inspector. Thirty-one of these were foreign vessels. Since the outbreak of Cholera in Russia, every vessel from that country has been visited by the Medical Officer of Health, as well as certain vessels from Norwegian ports, where Smallpox was reported to be prevalent. No cases of infectious diseases were discovered and the Bitton Isolation Hospital, with its steam disinfecting apparatus was not used.

The Public Health (Regulations as to Food) Act, 1907, has no application, as foreign food is not consigned to this port.

PLYMOUTH.

During the year 3,692 vessels were inspected. In 256 of these, notices were served to remedy 750 defects.

Two hundred and thirty-one vessels, carrying 47,277 crew and 68,563 passengers, arrived from plague infected districts, reporting sickness or death, as having occurred during the voyage. Of this number of vessels, 105 were personally inspected by Dr. Williams. In January a case of suspected plague from Kurachi was reported, and removed to the hospital ship. All precautions were taken, and the patient was discharged after three weeks' detention, as Dr. Williams considered it not to be true Bubonic Plague. In March a case of Measles was removed to the hospital ship, *Pique*. In May two cases of Typhoid Fever arrived, one from Bahia Blanca and the other from Philadelphia. Both were removed to the Borough Isolation Hospital. In July three cases of severe Smallpox arrived from Marionople, South Russia. These were removed to the *Pique*, and all recovered. The crew of the infected ship was re-vaccinated, and no further cases were heard of.

Dr. Williams reports that the hospital ship, *Pique*, on account of defects, is to be replaced by H.M.S. *Flamingo*.

TABLE VI.

TABLE VI.

1908.

(LOCAL GOVERNMENT BOARD TABLES I. AND IV.)

TABLE IX.

INFANT MORTALITY.

TABLE IX.

1908.

INFANT MORTALITY. (LOCAL GOVERNMENT BOARD TABLE V.)

TABLE XVI.

1908.

SUMMARY OF SANITARY INSPECTORS' REPORTS.

DISTRICTS.

